



UNITED STATES PATENT AND TRADEMARK OFFICE

002

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/707,349	12/08/2003	Tadashi Takano	SIMTEK6708	1348
25776	7590	09/10/2004	EXAMINER	
ERNEST A. BEUTLER, ATTORNEY AT LAW 10 RUE MARSEILLE NEWPORT BEACH, CA 92660				LE, DANG D
		ART UNIT		PAPER NUMBER
		2834		

DATE MAILED: 09/10/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

607

Office Action Summary	Application No.	Applicant(s)
	10/707,349	TAKANO, TADASHI
	Examiner Dang D Le	Art Unit 2834

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 01 July 2004.
- 2a) This action is **FINAL**. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1 and 3-10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1 and 3-10 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All b) Some * c) None of:
1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ . |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ . | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| | 6) <input type="checkbox"/> Other: _____ . |

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed 7/1/04 have been fully considered but they are not persuasive.

In response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, the motivation to combine the references is to monitor the operation of the motor.

In addition, references may be combined although none of them explicitly suggests combining one with the other. *In re Nilssen*, 7 USPQ2d 1500 (Fed. Cir. 1989).

In fact, no element in Kawakami needs to be replaced. One having ordinary skill in the art just needs to add the magnet (260) of Kim to the shaft end and add the sensor (247) of Kim to the plate (5) shown in Figure 5 of Kawakami in order to control the motor operation. In the art of motor and generator, it is well known that magnet and sensor are utilized for the aforementioned purpose. See Takano (6,680,553) and Shirakawa (4,982,125).

If the sensor element (247) of Kim is to be mounted on the plate (5) of Kawakami, the sensor element is then carried by the resinous body (2).

Yamamoto et al. clearly shows the inserts (6) in Figure 3. Moreover, in the art of motor and generator, it is well known that inserts can be used for mounting end plates. See Yamamoto et al. (4437027, 4549105 and 4456844) and Apple (1,584,502).

Finally, in the art of motor and generator, it is well known that the motor housing can be made with a cup shape and an end plate as in Figure 1 of Shirakawa and Figure 4 of Kawakami or with two end plates as shown in Figure 2 of Shirakawa, Figure 3 of Apple (1584502) and Figure 22 of Nagate et al. (5864192).

As a result the rejection is still deemed proper and repeated herein after.

Regarding the rejection under 35 U.S.C. 112, second paragraph, claim 1 recites permanent magnets at line 2 and at lines 5-6. It is not clear if these permanent magnets are different or not. The scope of claim 1 can include the fact that the permanent magnets at lines 5-6 are the same one recited at line 2.

Therefore, the rejection under 35 U.S.C. 112, second paragraph is retained. The rejection under 35 U.S.C. 112, first paragraph is withdrawn.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 1 and 3-10 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 is indefinite because it is not clear if the permanent magnets at lines 5-6 are the same as the permanent magnets at lines 2.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1 and 3-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nagate et al. (5,864,192) in view of Kawakami (6011339) and further in view of Apple (1,584,502).

Regarding claim 1, Nagate et al. shows a high power synchronous electric motor (Figure 22) comprised of a rotor having a rotor shaft carrying a plurality of circumferentially spaced permanent magnets (11), a stator (9) encircling said rotor and comprised of a plurality of poles around which coil windings (13) are formed, a high

capacity leads (14a) positioned at one axial end of said poles in circuit with said coil windings (13), a magnet detector (16) positioned at the other axial end of said poles and cooperating with permanent magnets (11) for determining the rotational position of said rotor.

Nagate et al. does not show a high capacity terminal circuit and a resinous body encasing said poles, said windings, and said high capacity terminal circuit to form a single unit and end closures carrying bearing for journaling opposite ends of said rotor shaft directly and detachably fixed to said resinous body.

Kawakami shows a high capacity terminal circuit and a resinous body encasing said poles, said windings, and said high capacity terminal circuit to form a single unit in Figure 5 for the purpose of ensuring ready connection of the end portion of a winding to external lead wires.

Apple shows end closures (42, 43) carrying bearing for journaling opposite ends of said rotor shaft directly and detachably fixed to the resinous body (44) for the purpose of holding all of the parts of the stator together.

Since Nagate et al., Kawakami et al. and Apple are all from the same field of endeavor; the purpose disclosed by one inventor would have been recognized in the pertinent art of the others.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to include high capacity terminal circuit as taught by Kawakami et al. for the purpose discussed above.

It would also have been obvious at the time the invention was made to a person having ordinary skill in the art to use end closures and threaded fasteners as taught by Apple for the purpose discussed above.

Regarding claims 3-6, it is noted that Nagate et al., Kawakami and Apple also show all of the limitations of the claimed invention.

6. Claims 1 and 3-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kawakami (6,011,339) in view of Kim (5,977,671). and further in view of Yamamoto et al. (4,496,866).

Regarding claim 1, Kawakami shows all of the limitations of the claimed invention except for a magnet detector positioned at the other axial end of said poles and cooperating with permanent magnets for determining the rotational position of said rotor and end closures carrying bearing for journaling opposite ends of said rotor shaft directly and detachably fixed to said resinous body.

Kim shows a magnet detector (247) positioned at one axial end and cooperating with permanent magnets (260) for determining the rotational position of said rotor for the purpose of controlling the motor operation.

In addition, Yamamoto et al. shows the end closures (12, 13) with threaded fasteners (6) for the purpose of supporting the rotor rotation.

Since Kawakami et al., Kim and Yamamoto et al. are all from the same field of endeavor; the purpose disclosed by one inventor would have been recognized in the pertinent art of the others.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to position a magnet detector at the other axial end of said poles and cooperating with permanent magnets for determining the rotational position of said rotor as taught by Kim for the purpose discussed above.

It would also have been obvious at the time the invention was made to a person having ordinary skill in the art to use end closures and threaded fasteners as taught by Yamamoto et al. for the purpose discussed above.

Regarding claims 3-7, it is noted that Kawakami et al., Kim, and Yamamoto et al. also show all of the limitations of the claimed invention.

7. Claims 8-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kawakami in view of Kim and Yamamoto et al. and further in view of Takagi et al. (6,081,056).

Regarding claims 8-10, the motor of Kawakami modified by Kim and Yamamoto et al. includes all of the limitations of the claimed invention except for the insulating material.

Takagi et al. shows the insulating material (36) for the purpose of isolate the electrical conductors (35).

Since Kawakami et al., Kim, Yamamoto et al. and Takagi et al. are all from the same field of endeavor; the purpose disclosed by one inventor would have been recognized in the pertinent art of the others.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to imbed the terminals instead of using separate insulating layer (30) as taught by Takagi et al. for the purpose discussed above.

Conclusion

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Information on How to Contact USPTO

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dang D Le whose telephone number is (571) 272-2027. The examiner can normally be reached on Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Darren Schuberg can be reached on (571) 272-2044. The fax phone

number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

9/6/04

A handwritten signature in black ink, appearing to read "Dang Le".

DANG LE
PRIMARY EXAMINER